

From: [James Thomas](#)
To: [DEQ WQP Admin](#)
Subject: comments re: mt nutrient criteria
Date: Tuesday, April 01, 2014 2:37:29 PM
Attachments: [Tight squeeze farm mdeq comments.pdf](#)

From: Anne Kania <floatingisland@me.com>;
To: James Thomas <jamesmanddebrathomas@yahoo.com>;
Cc: Bruce Kania <bruce@floatingislandinternational.com>;
Subject: DEQ comment
Sent: Tue, Apr 1, 2014 8:13:40 PM

RESPONSE LETTER to request for comments,
CIRCULAR 12B "Variances" for Nutrient Criteria
DATE: April 1, 2014

To: Montana Department of Environmental Quality
1520 E. Sixth Avenue
P.O. Box 200901
Helena, MT 59620-0901
Attention : Ms. Carrie Greeley

From: Thomas's Tight Squeeze Farm (Providing Sustainable Products and
Environmental Consulting Services)
1270 Pine Cone Road
White Swan, WA 98952

James M. Thomas, Sole Proprietor

RESPONSE TO REQUEST FOR COMMENTS TO THE PROPOSED WATER
QUALITY STANDARDS, NUTRIENT CRITERIA FOR MPDES PERMITTEES

I am an Environmental Scientist trained by the US Environmental Protection Agency in developing and implementing water quality standards. I used that training for the development and implementation of water quality standards for the Yakama Reservation on behalf of the Confederated Tribes and Bands of the Yakama Nation within the boundaries of Washington State. These water quality standards were approved and adopted by the Yakama Tribal Council, including nutrient criteria. Therefore, I am well aware of the implications associated with Montana Department of Environmental Quality (MDEQ) initiating development and implementation of nutrient criteria as a component of water quality standards for the State of Montana.

Specifically, I recognize the potential difficulties for MPDES dischargers in complying with the additional permit requirements compared to existing permit requirements and the difficulties for MDEQ in administering those permit requirements. Nation-wide addressing the environmental degradation occurring from eutrophication attributable to excessive nutrients is proving to be a challenge to permitted dischargers and discharge regulators alike. Therefore, I commend MDEQ for taking these courageous first steps of submitting these documents for comment toward development and implementation of these nutrient criteria incorporated into Montana Water Quality Standards. It is my hope that the leadership being demonstrated by Montana DEQ in managing nutrients in waters of Montana will set an example for other states to follow, thereby improving water quality not only in Montana waters but nation-wide.

I'm directing my comments toward Supplemental Document Circular12B, Section 1.0 wherein "variances" for permittees are discussed. I recognize the perceived difficulties

for dischargers with limited resources of staff and funding in meeting yet another MPDES Permit requirement and the almost knee-jerk response of small municipality permittees to apply for variances because of the perceived additional expense and the, until recently, limited technology available to small municipal dischargers.

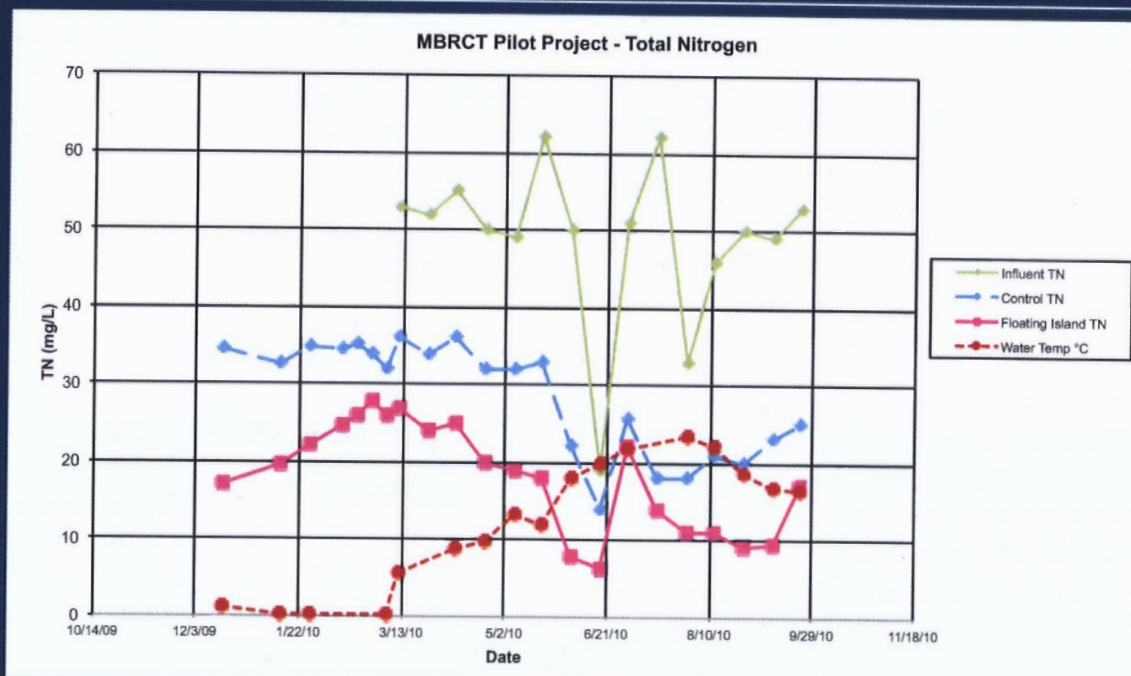
In my work as an Environmental Scientist/Water Quality Specialist I have been reviewing available technologies for helping small municipalities meet nutrient criteria for their waste water discharge permits since 2010. My review led me to the Montana based companies of Floating Islands International and Biohaven Inc., which are both based in Shepherd, Montana. As indicated by scientifically sound studies and numerous existing installations of the technologies, which these companies provide, nutrient management in waste water to the point of meeting nutrient criteria is now generally speaking, affordable and greatly simplified. I envision the technology provided by these two Montana companies to potentially be of great benefit to MPDES permittees. I'll use a small town waste water treatment plant near my home of South Central Washington State as an example of what I envision. This small town is similar to many rural Montana small municipalities with a resident base of less than 700 people, therefore a limited tax base to fund waste water management and a limited land base to treat waste water, with no room for waste water facility expansion. Nevertheless, because this town is within the confines of an Indian Reservation the NPDES regulator, the US EPA is requiring the municipality to meet a new NPDES permit requirement for Ammonia, which is a component of the Total Kjeldahl Nitrogen test discussed in the text of your proposed criteria. Because I am desirous of helping this small community meet the NPDES permit obligations without suffering "economic Impacts" such as referred to in the document (12B , 1.0) I will be presenting to the Town Council the opportunities for installing and operating in their existing waste water lagoons the technologies offered by the aforementioned Montana based companies to accomplish NPDES permit nutrient requirements. I am convinced this can be accomplished and if the technology is installed and managed properly a request by the Town Council for the US EPA version of a "variance" will not be necessary.

In my professional opinion, the more I've investigated the existing installations of this technology, the more I'm becoming convinced this technology is helping communities and individuals around the globe address eutrophication problems with the waters they are stewarding. Because water quality stewardship is my passion and profession I'll be doing all I can to proliferate the application of this technology in my home state of Washington.

Similarly the fact that these technologies are the products of Montana based companies which are in collaborative relationships with University based researchers and private professionals skilled in nutrient flow modeling and other aspects of water quality management indicates to me that at the least, these technologies should be included on a list of available and affordable technologies for MPDES permittees. Should this actually occur and the technology be widely applied I envision that MPDES

permittees using these technologies will be enabled to become actively involved in: 1) nutrient trading as discussed in the nutrient criteria document ; 2) modeling of nutrient inputs and outputs with the assistance of private professionals previously mentioned and as discussed in the document circular 12B ; 3) be enabled to meet or exceed nutrient criteria even during cold temperature periods as indicated in the attached graphs (Figures 1 and 2).

Cold weather performance - TN



Rehberg Ranch, Billings, MT

FLOATING ISLAND INTERNATIONAL®

Figure 1

Cold weather performance – NH₃

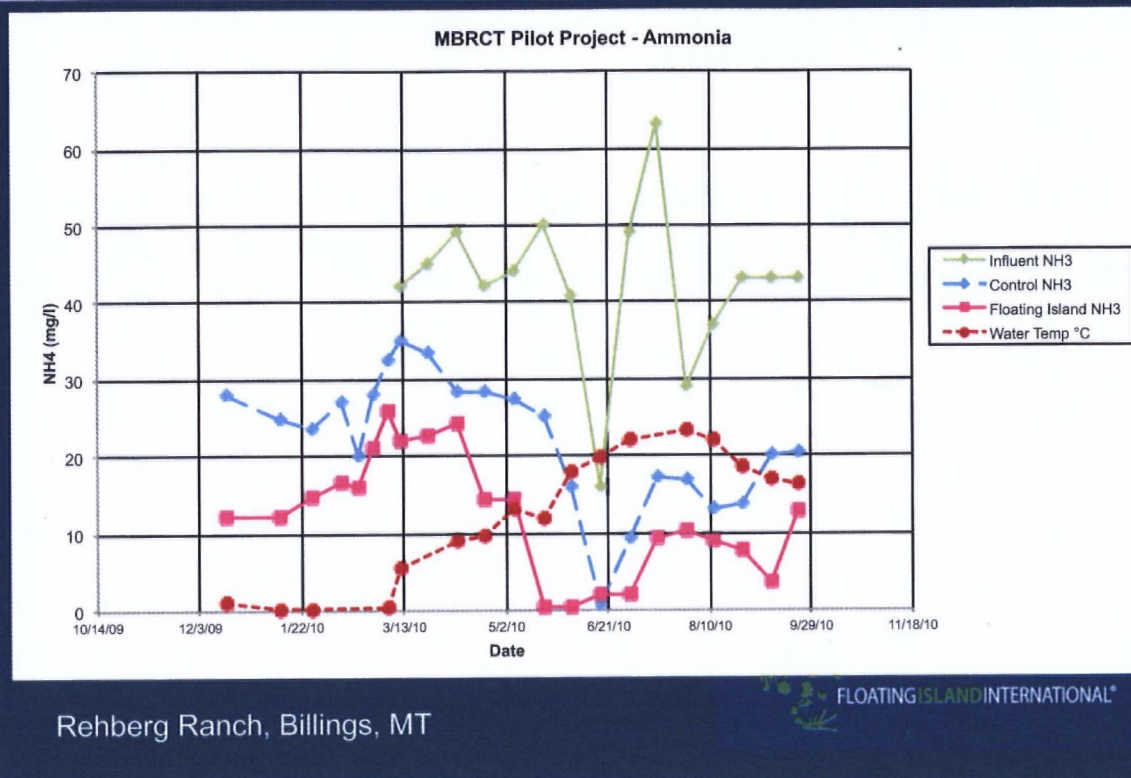


Figure 2

I'm convinced that the use of this emerging affordable technology by many MPDES permittees will make the knee-jerk response of dischargers to apply for a variance to be a thing of the past. Most importantly, the waters of Montana will be protected from excessive nutrients from point source dischargers while simultaneously dischargers using the technology will be spared from : "Economic Impacts" referred to in the document.

In closing, thank you for reading the comments of a Washington State based Environmental Scientist/Water Quality Specialist. Water quality is of global concern inasmuch as water does not recognize state boundaries. For example what occurs to water in Montana will eventually affect downstream water users, even across state boundaries. Once again thank you for your demonstrated leadership in this matter and please consider my request to include the technologies and services provided by the Montana based companies and their collaborators on a list of available technologies to help meet the proposed nutrient criteria for MPDES permittees.